

a line. Habitat, the vessie copulatrice or spermatheca of *Helix albolabris*, *Helix tridentata*, and *Helix alternata*.

This singular Entozoon in its general appearance and organization appears to be intermediate between *Cercaria seminis* and *Filaria*. Its varied form and movements are curious to observe; at one moment globular, then oval, ovate, fusiform, sigmoid, crescentic, &c., it appears as if it would outvie the kaleidoscope in its changes. The motions are vibratile, rotary, with a lateral progression, or whirling in circles like the insect *Gyrinus*.

Cryptobia helicis might be confounded with the Spermatozoa of the animal in which they are parasitic, on account of the organ in which they are found being connected with the generative apparatus and its supposed use as a spermatheca, but they may be readily distinguished; the Spermatozoa of Helices generally having either a uniform sigmoid or a beaded body, with an enormous proportionate length of tail, and a slow, vibratile motion. It may be well to mention that *C. helicis* does not exist in the collapsed state of the generative organs.

The subjoined sketch represents some of the principal forms of the animal, highly magnified.—From the Proceedings of the Philadelphia Academy of Natural Sciences.



Description of two living Hybrid Fowls, between Gallus and Numida.

By SAMUEL GEORGE MORTON, M.D.

The singular birds which form the subject of this communication were bred on a farm about seven miles from Wilmington, in the State of Delaware. The person who raised them states that the eggs that produced them differed in no respect from those of the guinea fowl, were part of a large number that were hatched at the same time, and that the birds are known to be just four years old. My friend Mr. Augustus E. Jessup having accidentally observed these birds on the above-mentioned farm, purchased them of the proprietor, and sent them to my care, with a request that they might be eventually placed in the collections of the Academy. Both are yet living and in good health; and the following description, in which I have been materially assisted by my friend Mr. William Gambel, has been drawn up after many examinations, made during a month and upwards that the birds have been in the charge of Mr. Robert Kilvington, horticulturist of this city.

The first of these birds is mottled with the colour of a reddish brown chicken and guinea fowl (*Numida meleagris*). Back and rump lineated with darkish brown and whitish, and a tinge of yellowish brown. Greater wing-coverts and margins of secondaries reddish brown; breast, belly, sides and under tail-coverts dirty white, with scattering feathers of the same. Quills and tail-feathers dusky brown, lineated, and finely speckled like those of the guinea fowl. Two quills in one wing and one in the tail are entirely white. Wings concave and rounded, one foot in length from flexure. First

quill an inch and a half shorter than the second, which last is one inch shorter than the third; 3—8 quills about equal. Tail of fifteen feathers, rounded; the two middle ones longest and pointed.

Head sparsely covered with feathers, almost bare for a considerable distance around the eye. Upper mandible dusky, except at tip, which, with the lower mandible, is whitish; towards the base it is somewhat striated, and covered by a reddish, fleshy cere, elongated at the angle of the mouth into barbules, which however are only rudimentary in comparison with those of the guinea fowl. Beneath the skin a distinct, hard, bony ridge can be felt, extending over the top of the head. Another bony ridge extends over the eye, giving it a sunken appearance. The nostrils are half-closed by a fleshy membrane; sides of head and front white. Top of head and nape with linear black feathers, elongated on the nape into hackles. Neck and upper part of the breast reddish brown. Tarsus very stout, with large, divided scutellæ; length $3\frac{1}{2}$ inches; middle toe and nail $2\frac{3}{4}$ inches. Total length about 2 feet.

The second of these birds bears yet more resemblance to a guinea fowl, both in shape and colour, than the preceding, not being so much mottled with reddish brown feathers, but principally with white. The bill appears to be not so much arched; the upper mandible is barbed as in the other, and the head is in general the same. Back, shoulders and upper tail-coverts dusky, lined with whitish like the guinea fowl; greater wing-coverts fading into white, the tertiaries being margined with the same. One quill white. Quills like the other as to colour and markings; third to sixth nearly equal. From flexure the wing measures $11\frac{1}{2}$ inches.

Back of head and neck with black linear feathers, not so much like hackles as those of the other bird. Breast, beneath and sides whitish. Tail nearly plucked out, as in the other; upper tail-coverts full and pendent. The bare flesh around the eye in both birds is tinged with blue.

The sounds which these birds utter are also intermediate, but partake much more of the harshness of the guinea fowl, although they occasionally *cluck* not unlike the common hen.

They are shy, wild and resentful, boldly attacking any one who irritates them. They have several times escaped from custody and flown a hundred yards or more, when they alight and run with great celerity.

The sex of these birds has not been determined with certainty, but the male characters seem to predominate. During the four years they were on the farm, they were never observed to have sexual intercourse with any other fowls. It is designed on a future occasion to notice their anatomical peculiarities, when the productive organs will be carefully examined.

It has been remarked by a distinguished naturalist, that "many of the birds which compose the gallinaceous order appear to be less difficult to unite with strange species than those of any other order. From the great majority of pheasants, mongrels may thus be produced; all the Hocos (*Crax*) will couple together in a state of do-

mestication; the pheasant will ally with the cock; the last with the turkey, with which the hoccas born in the domestic state will also unite. It appears, in fact, very possible to produce mongrels from the major part of those *Gallinæ* which are susceptible of domestication*.”

The latter remark receives strong corroboration from the facts we have adduced in this paper; and we believe that a hybrid progeny between the guinea fowl and common fowl is now for the first time made known to naturalists. The fact derives its peculiar interest from the remoteness of the genera which have thus produced an intermediate variety.—*Ibid.*

On the Habits of the Honey Buzzard in Confinement.

By GORDON JOS. FORSTER, Esq.

The Honey Buzzard now in my possession was wounded in the wing, and taken about three months ago. It was at first confined in a small garden-house, and for a day or two refused to eat anything, but at last began to feed upon small birds, but would not touch raw flesh or any kind of offal, nor has it yet done so, although it has not the smallest objection to a rat or a frog. Many birds of prey, after eating the muscular parts of any animal or bird, leave the entrails untouched; the Honey Buzzard, on the contrary, generally begins by opening the carcass, and then devouring everything it finds within it. It is very fond of the honeycomb of the wild bee, and when hungry will swallow large pieces of the comb containing the grub or larvæ, but when its appetite is not very keen it usually separates the cells, extracts the grub, and throws the wax away. There has been little honey in the combs this year, but when perchance any has dropt from the cells upon the ground, I have seen the bird repeatedly thrust its bill into the earth, where it appeared to be moistened by the honey. Unless very hungry it will not attempt to tear open a large bird, but is exceedingly fond of a fresh herring. There is something capricious in the appetite of birds, as well as in that of the human race. I had an eider duck for three years, and during that time it never could be prevailed upon to taste shell-fish; its favourite food was barley bread, though if grain of any kind was thrown down to it, it would devour it in the same manner and with the same rapidity as the common duck. Of all the birds of prey with which I am acquainted, the Honey Buzzard is apparently the gentlest, the kindest, and the most capable of attachment; it seems to possess little of the fierceness of that warlike tribe. It will follow me round the garden, cowering and shaking its wings, though not soliciting food, uttering at the same time a plaintive sound, something like the whistle of the golden plover, but softer and much more prolonged. Though shy with strangers, it is very fond of being noticed and caressed by those to whose presence it has been accustomed. In the same garden there are three lap-

* Griffith's Cuvier, viii. pp. 173, 175, 176. Prichard, Researches into the Physical History of Mankind, i. p. 140, 3rd ed.